

SAFETY PRECAUTIONS

BEFORE OPERATION

Do not smoke or use open flame in the area when servicing the batteries. Batteries generate hydrogen, a highly explosive gas.

When filling the fuel tank, provide a metal-to-metal contact between container, fuel tank, and the auger.

When using the handcrank, keep the thumb on the same side of the crank handle as the fingers to avoid injury should the engine kick back. Never attempt to spin the engine with the handcrank.

DURING OPERATION

Stop all operation and shut off the engine before any services or adjustments are performed.

Be extremely careful when using a fire extinguisher. The fire extinguishing agent removes oxygen from the air and could cause suffocation.

If the engine is operated in a closed area, exhaust gases must be piped to the outside. Exhaust gases contain carbon monoxide, which is a colorless, odorless, and poisonous gas.

AFTER OPERATION

Do not remove the radiator cap from a hot engine until the engine has been shut down for five minutes to relieve pressure and avoid being burned.

Do not solder or weld the fuel tank before cleaning with steam or submersion in a caustic immersion tank and rinsing out and filling with water. Make sure all traces of gasoline are removed prior to repair.

Change }
No. 2 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C. 11 Ju

**Operator, Organizational, Direct and General Support.
and Depot Maintenance Manual
AUGER, EARTH; SKID MOUNTED; 9-FOOT BORING DEPTH
(TEXOMA ENTERPRISES MODEL 254-10) FSN 3820-931-4509**

TM 5-3820-236-15, 9 December 1968 is changed as follows:

Page 1.1. Paragraph 1-1 is superseded as follows:

1-1. Scope

This manual is for your use in operating and maintaining the earth auger.

Paragraph 1-2 is superseded as follows:

1-2. Maintenance Forms and Records

a. Maintenance forms and records that are required to use are explained in TM 38-750.

b. You can improve this manual by recommending improvements, using DA Form 1 (Recommended Changes to Publications), letter and mail direct to Commanding General, U. S. Army Mobility Equipment Center, ATTN: AMSME-MPP, St. Louis, MO 63120.

Page B-1. Appendix B is superseded as follows:

**APPENDIX B
BASIC ISSUE ITEMS LIST AND ITEMS
TROOP INSTALLED OR AUTHORIZED**

Section I. INTRODUCTION

B-1. Scope

This appendix lists items required by the operator for operation of the earth auger.

B-2. General

This list is divided into the following sections:

b. *Basic Issue Items List—Section II.* Not applicable.

b. *Items Troop Installed or Authorized List—*

company the earth auger. These items are SUBJECT TO TURN-IN with the earth auger when evacuated.

B-3. Explanation of Columns

The following provides an explanation of the columns in the tabular list of Basic Issue Items List, Section II, and Items Troop Installed or Authorized, Section III.

a. *Source, Maintenance, and Records*

P Repair parts, special tools, and test equipment supplied from GSA/DSA or Army supply system and authorized for use at indicated maintenance levels.

P2 Repair parts, special tools, and test equipment which are procured and stocked for insurance purposes because the combat or military essentiality of the end item dictates that a minimum quantity be available in the supply system.

(2) *Maintenance code*, indicates the lowest level of maintenance authorized to install the listed item. The maintenance level code is:

Code	Explanation
C	Crew, generator

(3) *Recoverability code*, indicates whether un-serviceable items should be returned for recovery or salvage. Items not coded are non-recoverable. Recoverability codes are:

Code	Explanation
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R Applied to repair parts (assemblies and components), special tools, and test equipment which are considered economically reparable at direct and general support maintenance levels.

S Repair parts, special tools, test equipment and assemblies which are economically reparable at DSU and GSU activities and which normally are furnished by supply on an exchange basis.

b. *Federal Stock Number*. This column indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. *Description*. This column indicates the Federal item name and any additional description of the item required.

d. *Unit of Measure (U/M)*. A 2 character alphabetic abbreviation indicating the amount or quantity of the item upon which the allowances are based, e.g., ft, ea, pr, etc.

e. *Quantity Furnished with Equipment (BIIL)*. Not applicable.

f. *Quantity Authorized (Items Troop Installed or Authorized)*. This column indicates the quantity of the item authorized to be used with the equipment.

Section III. ITEMS TROOP INSTALLED OR AUTHORIZED LIST

(1) SMR code	(2) Federal stock number	(3) Description Ref No. & Mfr code	Usable on code	(4) Unit of meas	(5) Qty auth
PC	7520-559-9618	CASE, Maintenance and Operational Manuals		EA	1
PC	2805-353-8901	CRANK, Hand		EA	1
PC	4210-565-6837	EXTINGUISHER, Fire		EA	1

By Order of the Secretary of the Army:

Official:

VERNE L. BOWERS

Major General, United States Army

The Adjutant General

BRUCE PALMER, JR.
General, U. S. Army
Acting Chief of Staff

Distribution:

To be distributed in accordance with DA Form 12-25B (qty req block no. 386) Organizational Maintenance requirements for Earth Drilling Machine.

OPERATOR, ORGANIZATIONAL, DIRECT AND GENERAL SUPPORT
AND DEPOT MAINTENANCE MANUALAUGER, EARTH: SKID MOUNTED, 9 FOOT BORING DEPTH
(TEXOMA ENTERPRISES MODEL 254-10)
FSN 3820-931-4509

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

a. These instructions are published for the use of the personnel to whom Texoma Enterprises Earth Auger, Model 254-10, is issued. Chapter 1 through 4 provides information on the operation, preventive maintenance services, and organizational maintenance of the equipment, shipment and limited storage instructions and demolition to prevent enemy use. Chapter 5 provides information for direct and general support and depot maintenance. Also included are descriptions of main units and their functions in relationship to other components. Chapter 6 provides repair instructions.

b. Appendix A contains a list of publications applicable to the auger. Appendix B contains the Basic Issue Items list and the list of maintenance and operating supplies required for initial operation. Appendix C contains the Maintenance Allocation Chart.

c. Numbers in parentheses on illustrations indicate quantity. Numbers preceeding nomenclature callouts on illustrations indicate the preferred maintenance sequence.

1-2. Forms and Records

a. DA Forms and records used for equipment maintenance will be only those prescribed in TM 38-750.

b. Report of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded direct to Commanding General, U. S. Army Mobility Equipment Command, ATTN: AMSME-MPP, 4300 Goodfellow Blvd., St. Louis, Mo. 63120.

Section II. DESCRIPTION AND DATA

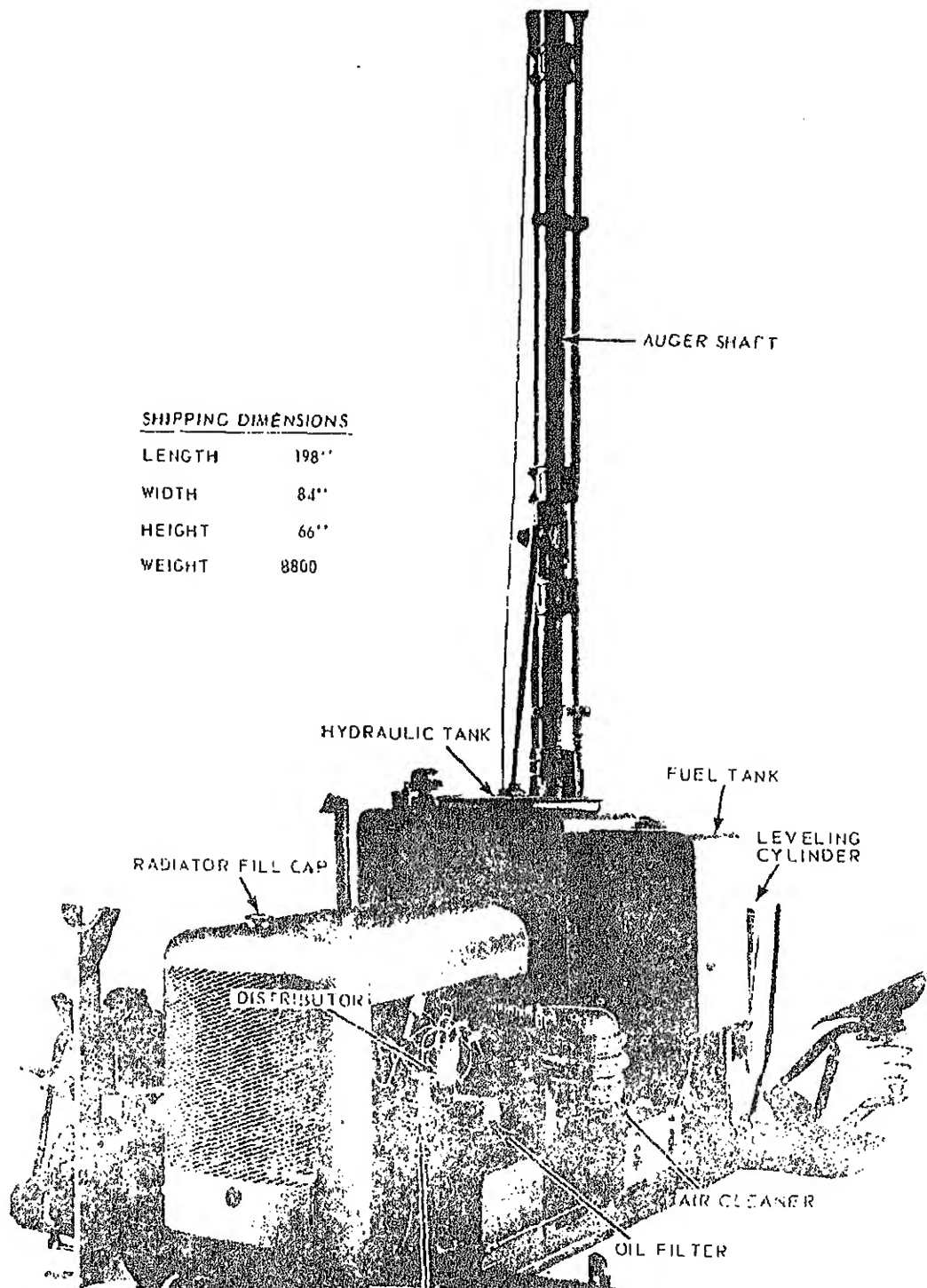
1-3. Description

a. *General.* The Texoma Enterprises Earth Auger, Texoma Model 254-10, illustrated on figure 1-1 and 1-2 is self-contained, skid mounted, earth boring assembly driven by a gasoline engine, Ford Model C5PF. All operations of the boring assembly are controlled by a hydraulic system. The auger is capable of boring holes 9 to 20 inches in diameter and to a depth of 9 feet. The boring assembly can be operated from vertical downward to 45°

The accessories consist of the variable speed governor, carburetor, fuel strainer, air cleaner, generator, starter, and voltage regulator. The oil filter is located on the left side of the engine next to the distributor.

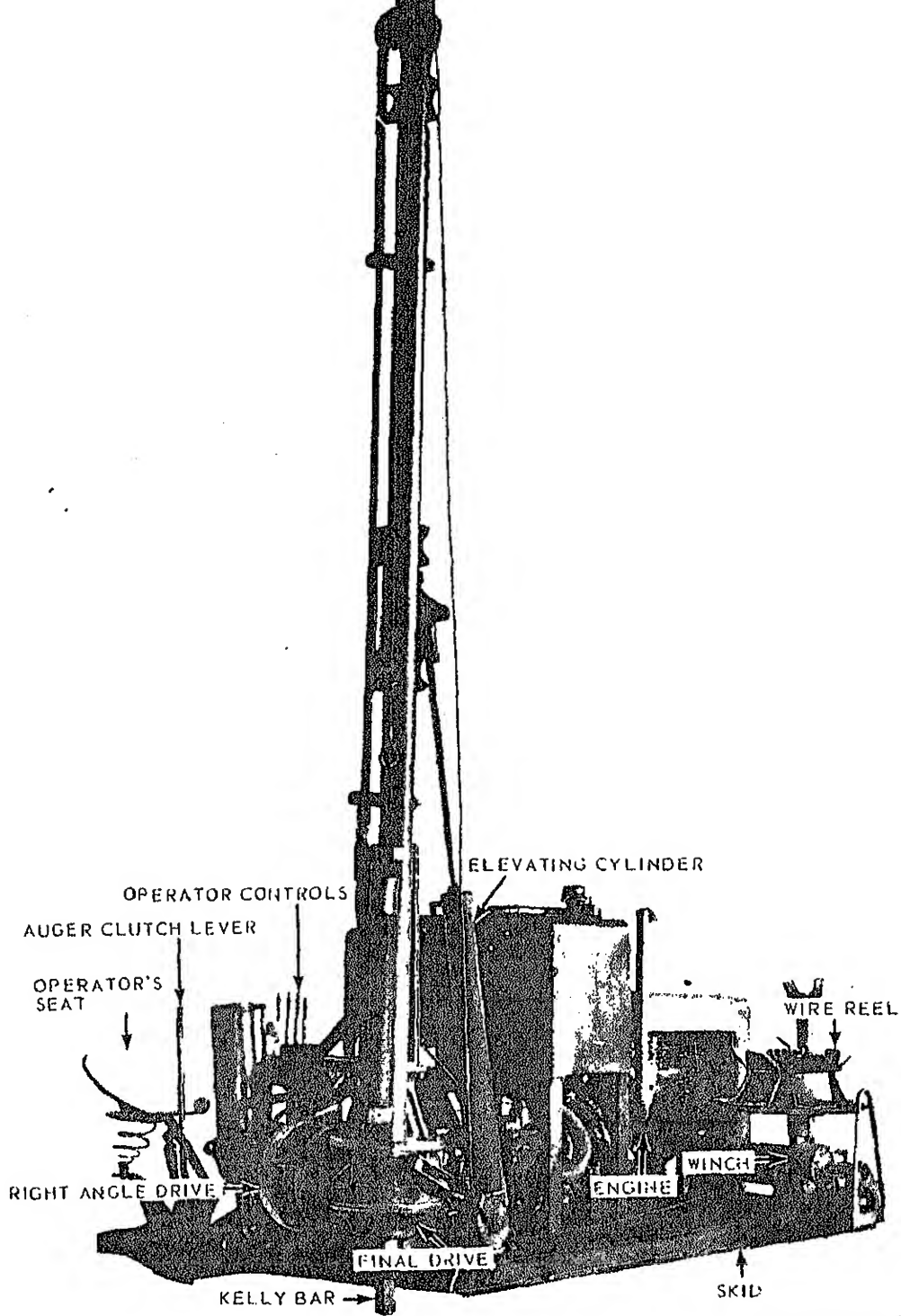
c. *Transmission.* The transmission has four speeds forward and one reverse. The transmission is a Ford Motor Company Model B6C 7001-A.

d. *Auger Assembly.* The auger assembly consists of the auger, figure 1-2, Kelly bar, final drive assembly, and right angle drive as



SHIPPING DIMENSIONS

LENGTH	198"
WIDTH	84"
HEIGHT	66"
WEIGHT	8800



1-4. Identification and Tabulated Data

a. Identification. The earth auger has three identification plates.

(1) *Manufacturer's nameplate.* Mounted on the rear of the skid, specifies model number, capacity, FSN, auger serial number, engine serial number, and contractor number.

(2) Maintenance plate mounted on the rear of the skid gives model number and serial number, information concerning air cleaner, torque of packing nuts, and clutch adjustments.

(3) Engine identification plate mounted on the lower right-hand side of the engine also gives the serial number, type, and options.

b. Tabulated Data.

(1) Auger assembly.

Manufacturers.....Texoma Enterprises,
Incorporated
Model.....254-10

(2) Engine.

Manufacturer.....Ford Motor Company
Model.....C5PF
Type.....Gasoline
Number of cylinders.....6
Cooling.....Liquid
Electrical system.....12 volts
Batteries required.....1-(12 volts)
Ground.....Negative

(3) Oil Filter.

Manufacturer.....Rotunda Oil Filter
Model.....R1-A
Type.....Throw-away Element

(4) Transmission.

Manufacturer.....Ford Motor Company
Model.....B6C 7001-A
Number of speed.....4 forward, 1 reverse

(5) Adjustments.

Fan belt deflection.....1/2 in. (inch)

(6) Dimensions and weights.

Overall length.....198 in.
Overall width.....84 in.
Overall height.....66 in.
Shipping weight.....8800 lb (pound)

(7) Capacities.

Fuel tank.....16 gallons
Cooling system.....16 quarts
Engine crankcase.....6 quarts
Transmission.....3 quarts
Right-angle drive.....3 quarts
Final drive.....3 1/2 quarts
Hydraulic system.....63 gallons
Air cleaner.....2/3 quart
Oil filter.....1 quart

(8) Performances.

Diameter hole	Maximum depth
9 in.....	9 ft. (foot)
12 in.....	9 ft.
16 in.....	9 ft.
20 in.....	9 ft.
Drilling angle.....	Up to 45° (from vertical)

1-5. Difference in Models

This manual covers only the Texoma Earth Auger, Model 254-10. No differences exist for the model covered manual.

CHAPTER 2

INSTALLATION AND OPERATING INSTRUCTION

Section I. SERVICE UPON RECEIPT OF MATERIAL

2-1. Inspecting and Servicing the Earth Auger

Note. Make certain the earth auger is completely deprocessed before operating. Make sure preservations have been removed from the crankcase and fuel tank.

a. Perform the preventive maintenance services listed in the preventive maintenance checks and services (table 3-1).

b. Make a complete visual inspection to see that the required tools, repair parts, publications, accessories, and attachments are with the earth auger and in serviceable condition.

c. Visually inspect the earth auger for loss of parts or damage which may have occurred during loading, shipping, or unloading.

d. Report all damage and deficiencies to direct support maintenance.

2-2. Installation or Setting-Up Instructions

a. General. The auger is mounted on a carrier with a flat body of suitable size. Setting-up consists of positioning the carrier so that the earth auger can bore holes where desired, installation of augers, servicing battery, re-

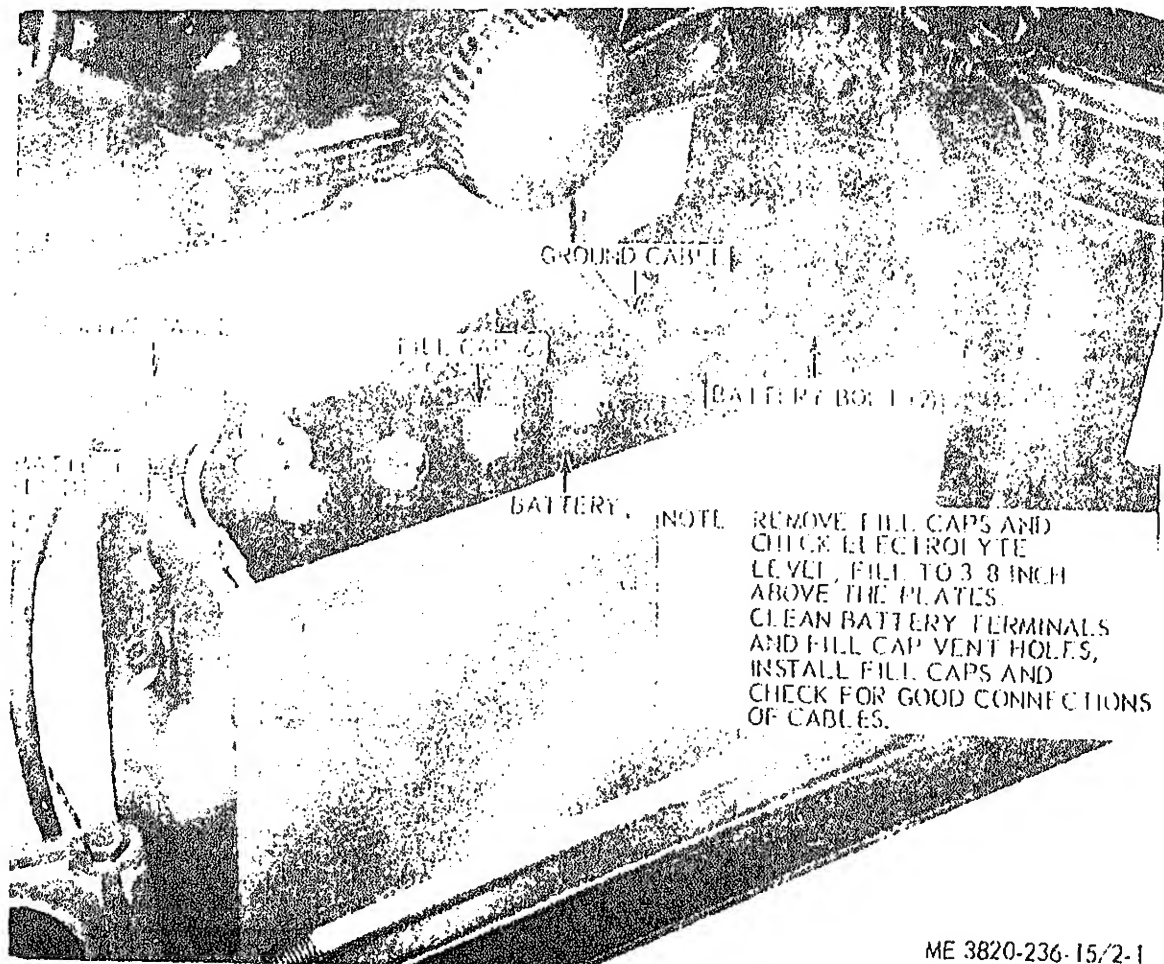
moving auxiliary plug from inside hydraulic tank and installing suction adapter, and lowering the support jacks to the ground when necessary.

b. Battery Service. Service the battery as instructed in figure 2-1.

c. Hydraulic Tank Service (fig. 2-2). Clean strainer and breather. Check "O" rings and gasket. Replace if necessary.

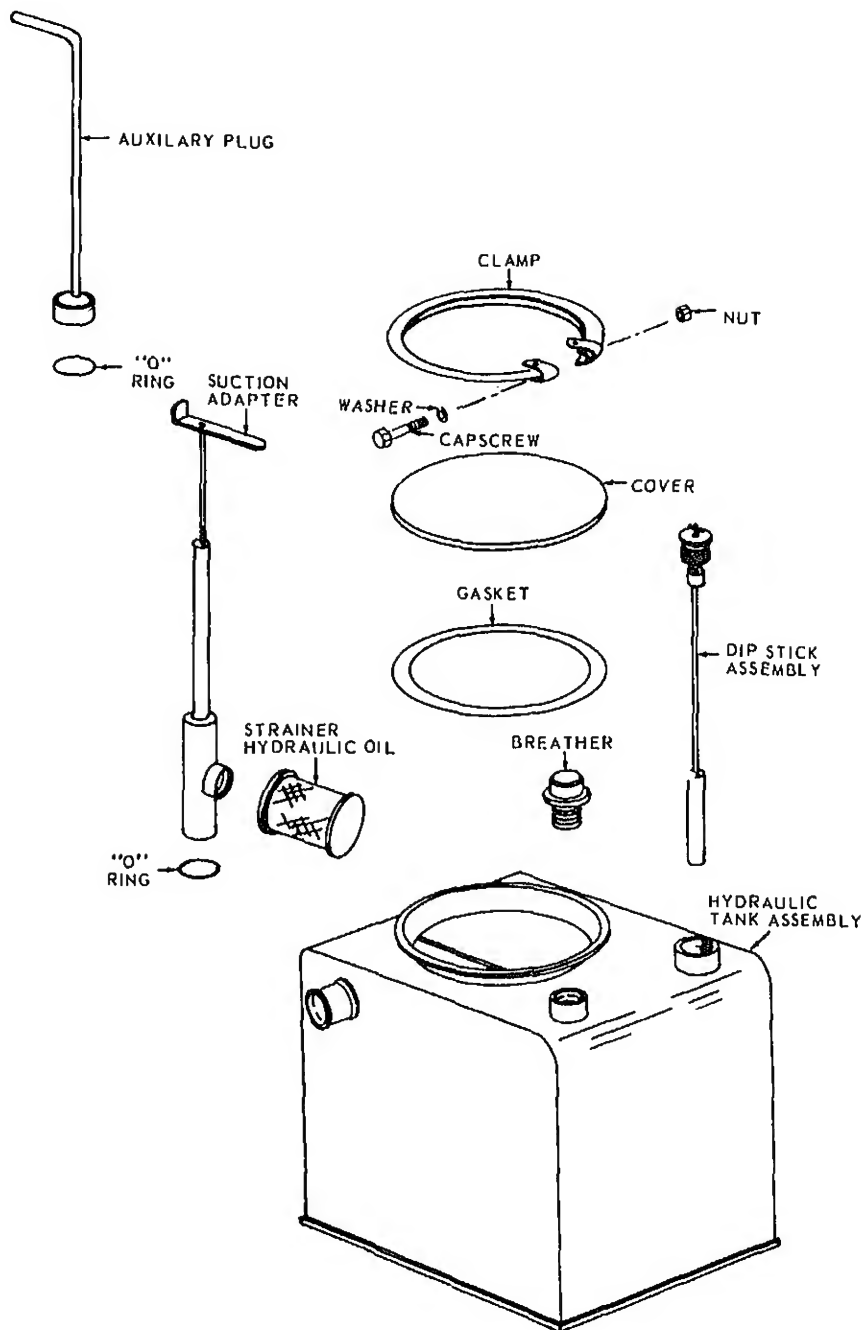
d. Support Jacks. Two telescoping support jacks are mounted under the rear corners of the carrier body. The jacks are carried swung up towards the center of the carrier when not in use. When operating the auger in hardpan or rocky soil, which would cause the auger to bounce, the jacks must be lowered. The jacks must also be lowered when operating in thick clay or mud-like texture, which would cause suction when removing the auger from the holes. Lower the jacks to the ground whenever necessary as instructed in figure 2-3.

e. Auger, Bits and Points. Install the bit and point on the auger and the auger on the Kelly bar as shown on figure 2-4.



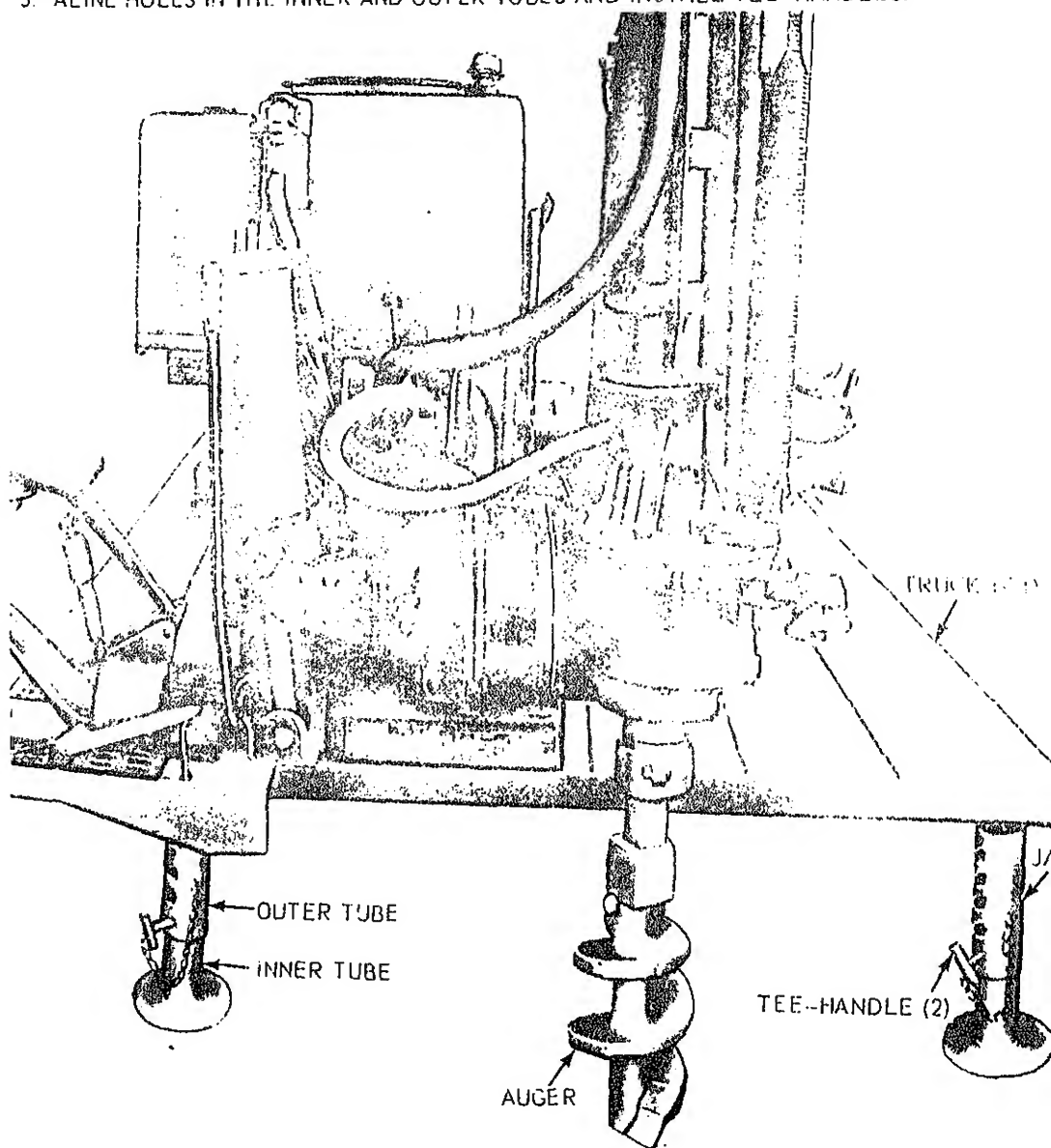
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Figure 2-1. Battery service.



- NOTE: 1. REMOVE CAPSCREW, NUT, AND CLAMP FROM TOP OF HYDRAULIC TANK.
2. REMOVE COVER.
3. LIFT AUXILIARY PLUG, LOCATED INSIDE TANK, FROM HYDRAULIC TANK OUTLET.
4. INSTALL SUCTION ADAPTER OVER S

1. DISCONNECT CARRYING CHAIN FROM JACK AND ALLOW JACK TO SWING DOWN.
2. PULL TEE-HANDLE FROM HOLES AND LOWER INNER TUBE TO DESIRED POSITION.
3. ALINE HOLES IN THE INNER AND OUTER TUBES AND INSTALL TEE-HANDLES.



3. Preparation for Movement

Prepare the earth auger for movement as follows:

a. Clean and remove the auger from the belly bar in reverse of the instructions on figure 2-4.

b. Shorten or raise the jack support by:

(1) Disconnect carrying chain from jack and allow jack to swing down.

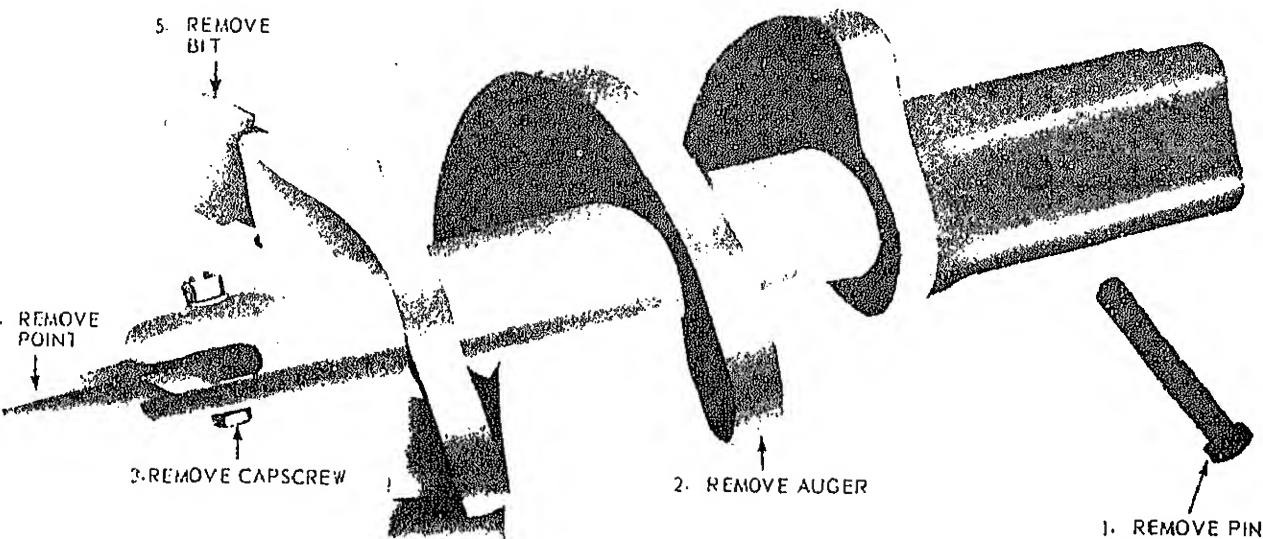
(2) Pull tee-handle from holes and lower inner tube to desired position.

(3) Aline holes in inner and outer tubes and install tee-handles.

c. Lower the auger shaft onto the carrier bracket in reverse of the instructions in figure 2-7.

2-4. Movement by Carrier

The earth auger may be readily moved as it is normally mounted on a carrier. If it has been removed from the carrier, it can be shipped by rail for long movements. Report to organizational maintenance for help in locating and securing the earth auger.



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Figure 2-4. Auger, bit, and point.

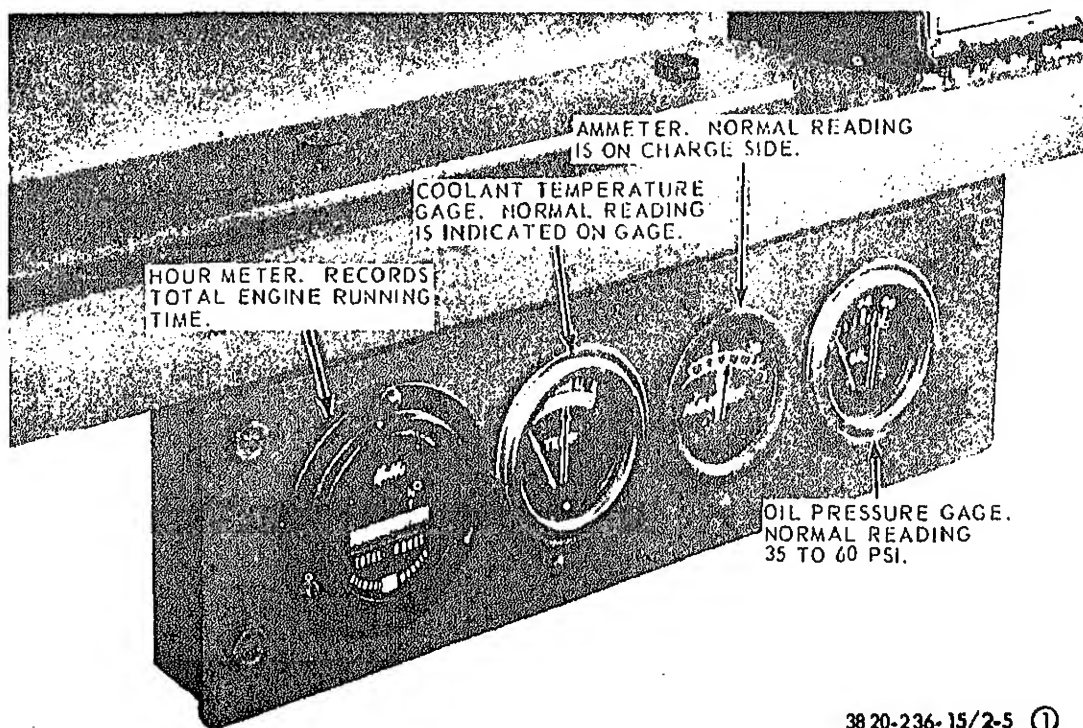
Section III. CONTROLS AND INSTRUMENTS

2-5. General

This section describes, locates, illustrates, and furnishes the operator or crew sufficient information about the various controls and instruments for proper operation of the earth auger.

2-6. Controls and Instruments

The purpose, location, and use of the controls and normal readings of the instruments and gages are illustrated on figure 2-5.



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Figure 2-5 (1). Controls and instruments.

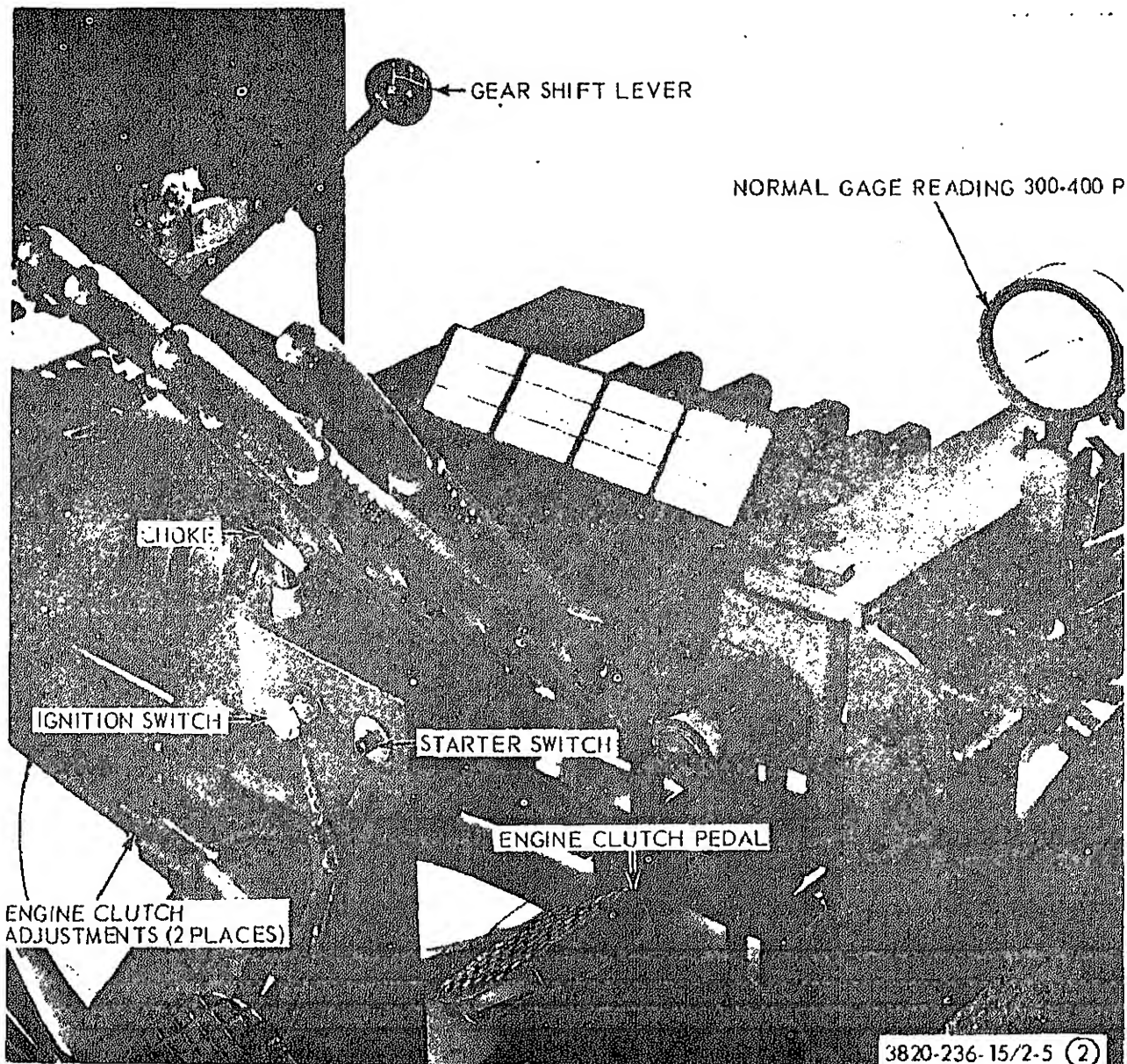


Figure 2-5 (2)—Continued.

a. The instructions in this section are published for the information and guidance of the personnel responsible for the operation of the earth auger.

b. The operator must know how to perform every operation of which the earth auger is capable. This section gives instructions on starting, stopping, and operating the earth auger. Since nearly every job presents a different problem, the operator may have to vary given procedures to fit the individual job.

2-8. Starting the Earth Auger Engine

a. Preparation for Starting.

(1) Perform the preventive maintenance service.

(2) Place all controls in neutral position.

b. Electrical Starting (fig. 2-5(2)).

(1) Pull ignition switch.

(2) Pull the choke out about half way. If engine is cold pull choke out all the way.

(3) Push the starter button.

(4) Allow engine to warm up for seven to ten minutes before engaging the load.

c. *Manual Starting.* The manual starting will be performed in the same manner as the electrical starting, except the handcrank will be used instead of the starter switch.

Warning: When using the handcrank keep the thumb on the same side of the crank handle as the fingers to avoid injury should the engine kick back. Never attempt to spin the engine with the handcrank.

2-9. Stopping the Earth Auger Engine

a. Place all controls in neutral position.

b. Stop the earth auger engine.

(1) Lower the engine speed to idle.

(2) Turn off the ignition switch. If the engine has been running hot, let it run at fast idle speed a few minutes to dissipate the excess heat.

2-10. Operation of Equipment

a. *General.* The auger is designed for use in boring holes in the earth for construction purposes such as fence, power line, anchor post holes, or for explosives. The auger at full speed in fourth gear will rotate at not less than 150 rpm and in low gear not more than 40 rpm. The auger valve levers are placed so that the operator may be seated at the left rear of the unit. From this position the operator can observe the boring operations and the engine instruments at the same time. All operations of the earth auger can be performed from the operators seat.

b. Auger Gear Warming Operation.

(1) Start the engine (para 2-8).

(2) Engage the engine clutch and run engine at idle speed.

Note. Do not attempt to shift the transmission without first disengaging the engine clutch.

(3) Engage the auger clutch by pulling back the auger clutch lever (fig. 2-6) and allow auger shaft to rotate five minutes.

Note. Do not run the engine faster than idle until the auger gears are thoroughly warmed up.

(4) Disengage the auger clutch and engine clutch, and shift transmission to neutral.

(5) Stop engine (para 2-9).

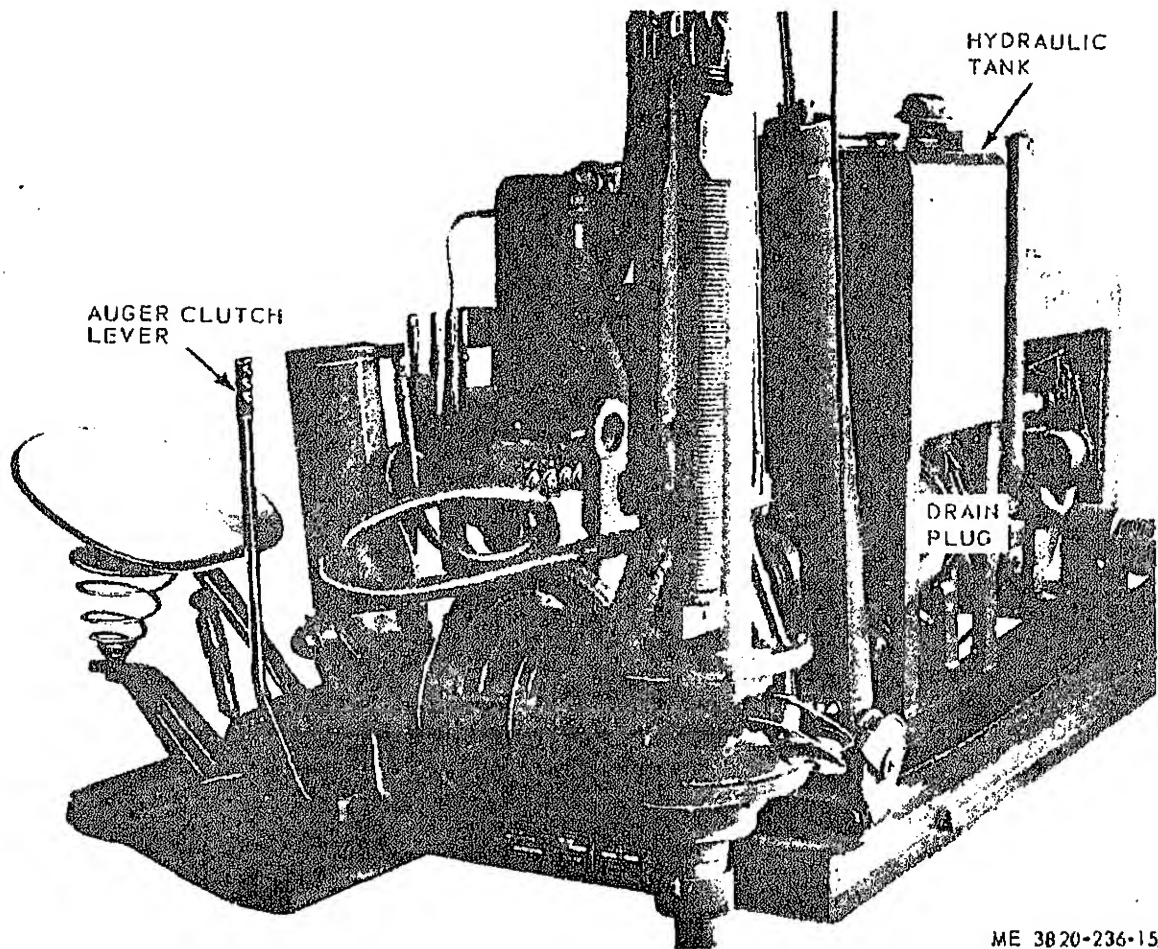
c. Auger Shaft Elevating Operation.

(1) Start engine (para 2-8).

(2) Elevate the auger shaft as in figure 2-7. Pull the control valve handle to raise auger shaft. Push the control valve handle to lower the auger shaft.

d. *Leveling Operation.* Level the auger as instructed in figure 2-8. The leveling cylinder positions the bar assembly vertically from left to right. Push the control valve handle to go right, pull for left.

e. *Boring Operations.* Perform the operation as shown in figure 2-9(1) and 2-9(2).

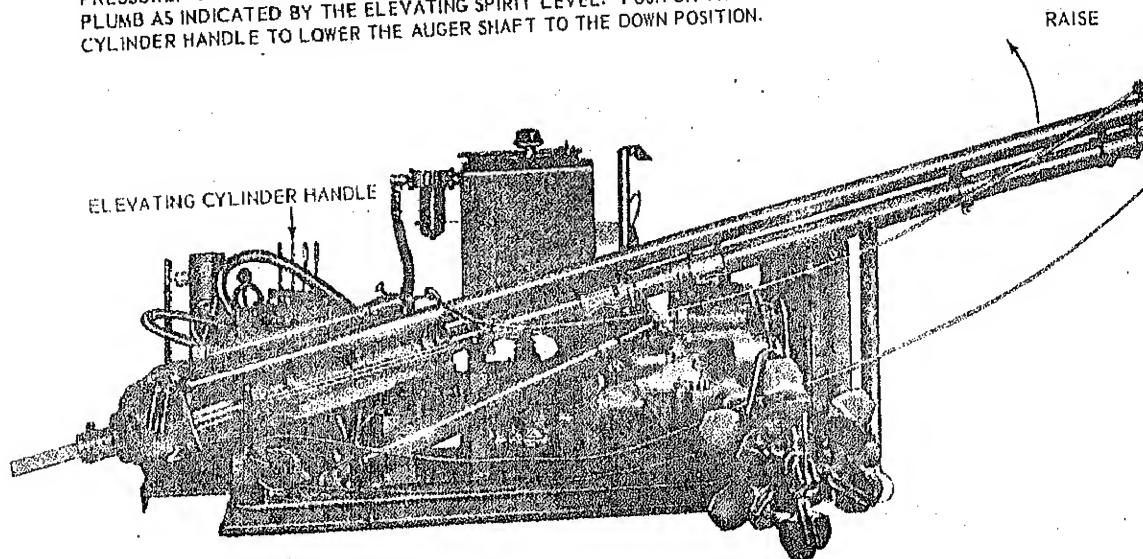


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Figure 2-6. Auger clutch lever and hydraulic tank.

ELEVATING.

PULL THE ELEVATING CYLINDER HANDLE TO ELEVATE THE AUGER SHAFT TO THE VERTICAL POSITION. IF THE AUGER SHAFT DOES NOT RAISE IMMEDIATELY, INCREASE PRESSURE ON THROTTLE TREADLE TO INCREASE ENGINE SPEED AND RAISE HYDRAULIC PRESSURE. OPERATE THE ELEVATING CYLINDER HANDLE UNTIL THE AUGER SHAFT IS PLUMB AS INDICATED BY THE ELEVATING SPIRIT LEVEL. PUSH ON THE ELEVATING CYLINDER HANDLE TO LOWER THE AUGER SHAFT TO THE DOWN POSITION.



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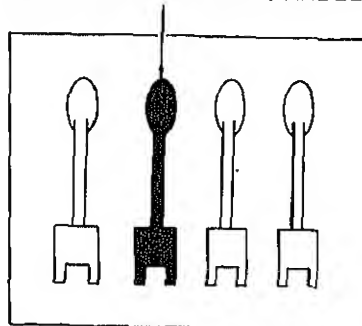
Figure 2-7. Auger elevating instructions.

LEVELING - (RIGHT ANGLE)

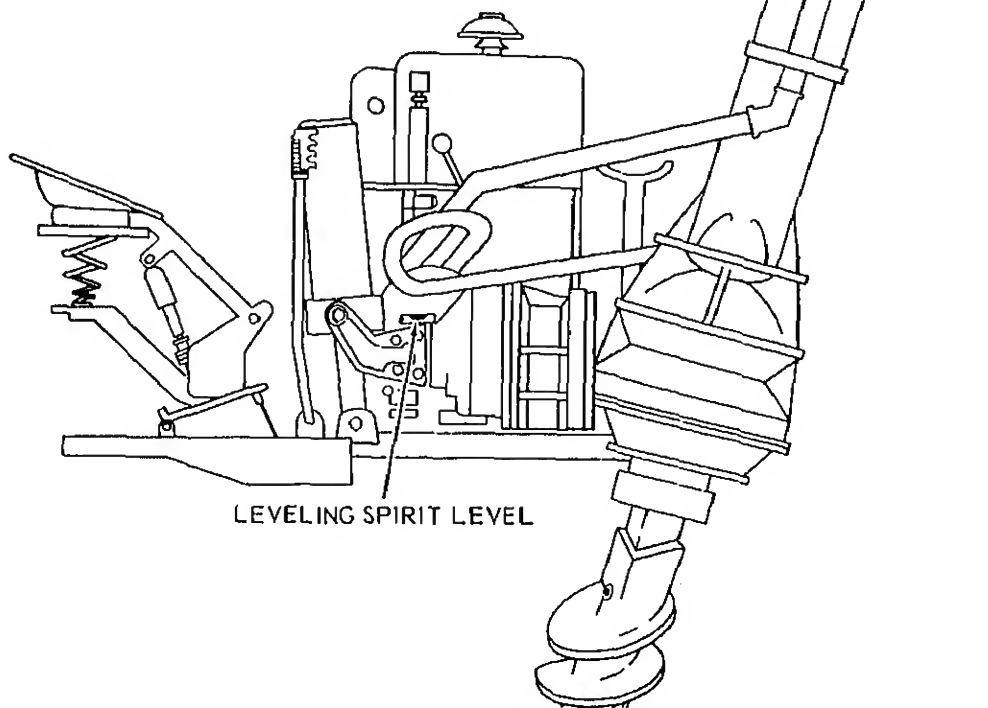
PUSH ON LEVELING CYLINDER HANDLE TO TILT AUGER SHAFT TO RIGHT. RELEASE HANDLE WHEN AUGER SHAFT IS PLUMB AS INDICATED BY LEVELING SPIRIT LEVEL.

PULL ON LEVELING CYLINDER HANDLE TO TILT AUGER SHAFT TO LEFT.

LEVELING CYLINDER HANDLE



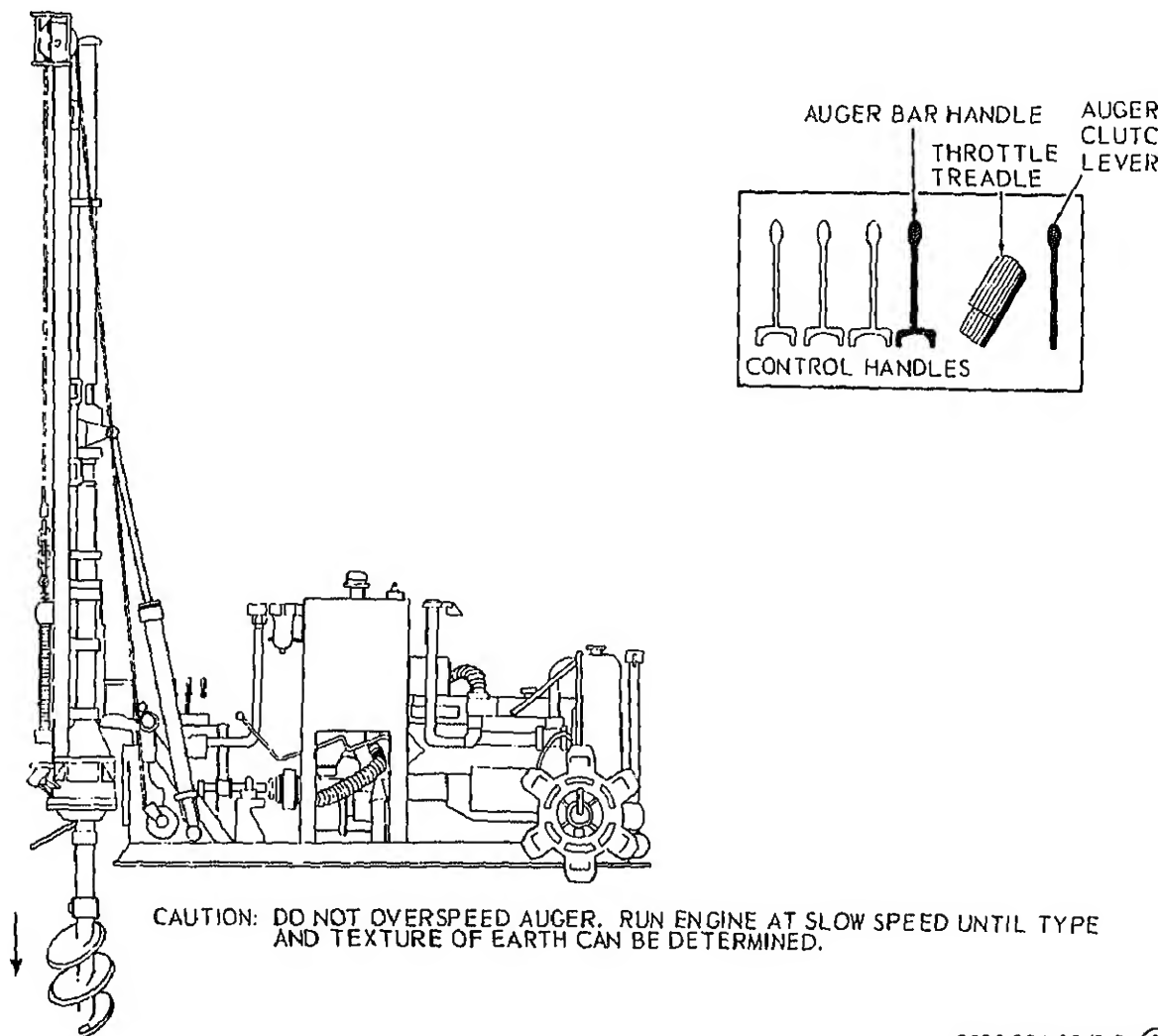
CONTROL HANDLES



LEVELING SPIRIT LEVEL

DRILLING

ENGAGE AUGER CLUTCH BY PULLING BACK ON AUGER CLUTCH LEVER, PRESS DOWN ON THROTTLE TREADLE TO INCREASE ENGINE SPEED AND PUSH AUGER BAR HANDLE FORWARD TO LOWER AUGER INTO EARTH.



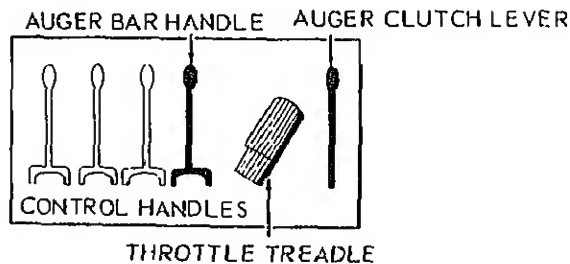
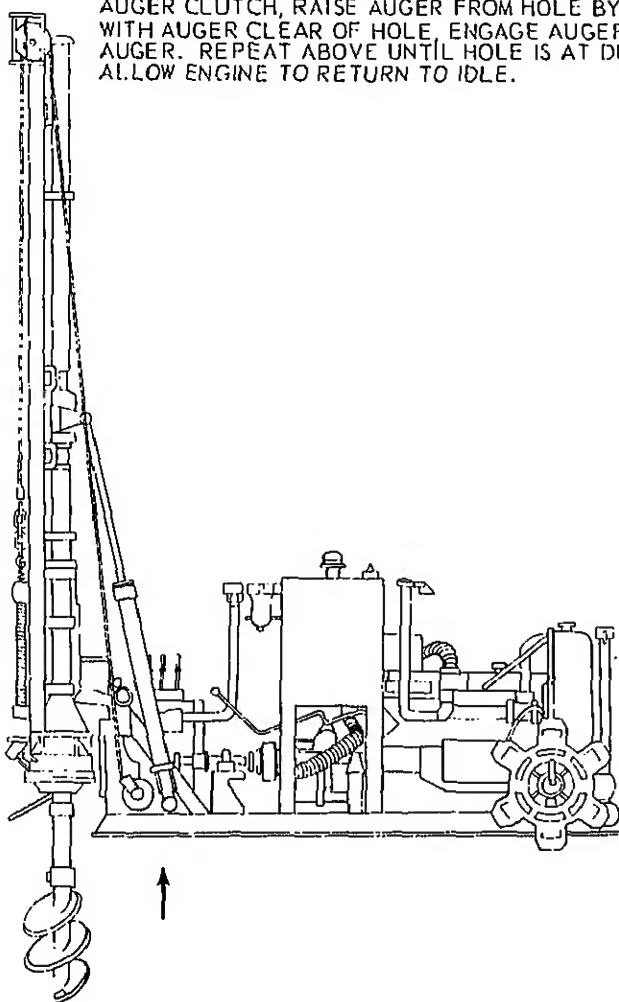
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A. DRILLING

Figure 2-9(1). Boring operation instructions.

RETRACTING

WHEN AUGER IS DEEP ENOUGH IN EARTH TO BE LOADED WITH DIRT, DISENGAGE AUGER CLUTCH, RAISE AUGER FROM HOLE BY PULLING AUGER BAR HANDLE, AND WITH AUGER CLEAR OF HOLE, ENGAGE AUGER CLUTCH. ROTATION WILL CLEAN AUGER. REPEAT ABOVE UNTIL HOLE IS AT DESIRED DEPTH. RAISE AUGER AND ALLOW ENGINE TO RETURN TO IDLE.



3820-236-15/2-9 (2)

B. RETRACTING

Figure 2-9(2)—Continued.

Section V. OPERATION UNDER UNUSUAL CONDITIONS

2-11. Operation in Extreme Cold (below 0° F)

a. See that antifreeze has been checked and is correct for the lowest possible temperature expected (TB ORD 651).

b. Inspect the cooling system and report

d. Keep fuel tanks full at all times to prevent condensation.

e. Drain and service fuel strainers frequently.

f. During warm up allow engine to reach normal operating temperatures before applying

Clean and flush the cooling system at frequent intervals.

(2) Make sure the fan belts are in good condition and that the tension is adjusted properly and that the thermostat is in proper working condition.

(3) Clean between the fins of the radiator core frequently to get the best possible cooling. Use compressed air if available to blow all dust and dirt out of the core. Avoid using water that contains substances likely to cause excessive scale and rust.

b. Lubrication System. Lubricate the unit for hot weather operation in accordance with figure 3-1(1) and 3-1(2).

c. Fuel System.

(1) Clean the gasoline strainer frequently and check the fuel filters.

(2) Check the air cleaner. Keep it clean and free from foreign matter.

(3) Be sure the tank vents in the fuel system are open.

d. Electrical System. Check the electrolyte level in the battery daily, and fill to three-eighths inch above the plates with distilled water, if available. Clean mineral free water may be used.

13. Operation in Dusty or Sandy Areas

a. Cooling System.

(1) Keep the radiator core free of dust, sand, or foreign matter to avoid overheating of the engine.

(2) Keep dust and sand from entering the radiator by wiping dust or sand from the cap before adding coolant.

b. Lubrication System.

(1) Lubricate the unit in accordance with the current lubrication order.

(2) Keep all lubrication points clean and avoid spilling oil on the unit as it will collect dust and sand.

(3) Clean and replace filters more often than in normal operation.

c. Fuel System.

(1) Take all precautions necessary to

necessary.

d. Electrical System.

(1) Service the batteries frequently and keep battery box covers securely fastened.

(2) If any of the instrument gages have loose-fitting glass, use a sealer or tape to keep dust or sand from entering.

2-14. Operation Under Rainy or Humid Conditions

a. Lubrication System.

(1) Lubricate the unit in accordance with the current lubrication order.

(2) Keep the filler caps and plugs tight to prevent water from entering the lubrication system.

b. Fuel System.

(1) Keep the fuel tanks full to avoid condensation of moisture, and keep fill caps tight.

(2) Inspect gasoline strainer for accumulated water more often than is required during normal operation.

c. Electrical System.

(1) Check wiring for cracked or frayed insulation. See that wiring is kept dry and waterproofed.

(2) Coat the battery terminals with grease, and keep the battery box secured.

2-15. Operation in Salt Water Areas

a. Lubrication System.

(1) Keep oil filler caps and plugs tight.

(2) Be sure to clean and dry all fittings before lubricating.

b. Cooling System. Be sure the water in the cooling system is free from salt or alkali. Use an approved rust inhibitor to prevent the formation of rust or scale in the cooling system.

Caution: The cooling system is not intended for use with salt water. However, salt water may be used in extreme emergencies. Drain, flush and refill the cooling system as soon as possible after having used this expedient.

c. Electrical System.

(1) Clean electrical connections and keep them dry.

(2) Coat the battery terminals with grease and secure battery box cover.

d. Protection.

(1) Wash the unit frequently with clean, fresh water.

(2) Remove corrosion from any unpainted surface. Report areas in need of painting to organizational maintenance.

2-16. Operation at High Altitudes

a. The engine in this unit is designed to operate under normal conditions up to 5,000 feet above sea level without special service or adjustment.

b. Above 5,000 feet the engine efficiency will be reduced. This is a normal condition which cannot be prevented, but maximum performance can be maintained by following all service instructions carefully. Be sure air clean-

ers are clean and free of objects that might restrict flow of air to the unit.

c. Be alert for pressure leaks that allow the coolant to boil with resulting loss of coolant. Inspect the radiator cap and gasket frequently for tight sealing.

2-17. Fire Extinguisher

a. Description. The fire extinguisher is suitable for electrical fires because it will not damage electrical equipment or conduct electricity.

b. Operation. Remove fire extinguisher from its location; pull the pin, and squeeze the lever. Direct the foam at the base of the flame.

Warning: Be extremely careful when using a fire extinguisher in an enclosed area. Provide adequate ventilation before entering an enclosed area where the extinguisher has been used.

c. Maintenance. For maintenance of the fire extinguisher refer to TB 5-4200-200-10 and TM 5-687.

OPERATOR AND ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. OPERATOR'S AND ORGANIZATIONAL MAINTENANCE

TOOLS AND EQUIPMENT

3-1. Tools and Equipment

Tools and equipment issued with or authorized for the earth auger are listed in the Basic Issue Items List, appendix B. No special tools or equipment are required by the opera-

tor or organizational maintenance personnel for maintenance of the earth auger.

3-2. Organizational Maintenance Repair Parts

Organizational maintenance repair parts are listed and illustrated in TM 5-3820-236.

Section II. LUBRICATION

3-3. General Lubrication Information

The lubrication order shown in figure 3-1 is an exact copy of the lubrication order for the earth auger. For the current lubrication order, refer to DA Pamphlet 310-4.

3-4. Detailed Lubrication Information

a. General. Replace covers on lubrication containers after use and store in a clean, dry place. Keep all containers used in handling lubricating oil or fuel, clean and ready for use.

b. Cleaning. Use an approved cleaning solvent to clean all surfaces surrounding the point of application before applying the lubricant.

c. Point of Lubrication. Refer to LO 5-3820-236-12 for points of application and proper lubricant. Operate the unit for 5 minutes after

lubrication. Inspect the filter element for leaks. Stop the unit, wait 5 minutes, and check the oil level. Add oil to bring the oil up to the full mark.

d. OES Oil. When using symbol OES in the crankcase, these precautions must be observed:

(1) The crankcase oil level must be checked frequently, as oil consumption may increase.

(2) The oil may require changing frequently because contamination by dilution and sludge formation will increase under weather operation. See LO 3820-236-12.

f. Oil Filter Assembly Service. Service oil filters as instructed on figure 3-2.

g. Air Cleaner Service. Service the air cleaner as instructed on figure 3-3.

LUBRICATION ORDER

L05 3820-236-12

AUGER, EARTH: SKID MOUNTED, GASOLINE DRIVEN (TEXOMA, INC. MODEL 254-10) W/FORD ENGINE MDL. C5PF-6006-F

Reference C900-11

Intervals are based on normal operations. Adjust to compensate for abnormal operations and severe conditions. During inactive periods sufficient lubrication must be performed for adequate preservation.

Clean parts with SOLVENT, dry-cleaning or with OIL, Fuel, Diesel. Dry before lubricating.

A dotted circle indicates a drain below.

Relubricate after washing.

Clean fittings before lubricating.

Lubricate points indicated by dotted arrow shafts on both sides of equipment.

Drain crankcase and gear cases when hot after operation; replenish and check level when cool.

LUBRICANT • INTERVAL

INTERVAL • LUBRICANT

FOLD

FOLD

Water Pump
Generator Starter,
(Sealed bearings
no lubrication required.)

Oil Filter
(Remove, install
new filter.)
(See Note 2.)

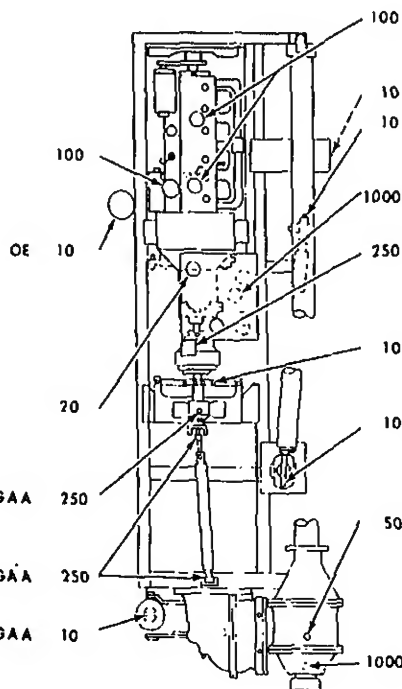
Air Cleaner
(Refill oil reservoir
to level mark, every
50 hours disassemble
entire unit, clean, re-
oil and reassemble.)
(See key.)

Hydraulic Oil Strainer
(For servicing instructions
see TM 5-3820-236-
15.)

Drive Shaft Support
Bearing
(Sparingly.)

Universal Joint
(Sparingly.)

Leveling Cylinder
Shaft and Clutch
Control Shaft
(3 fittings)



- 100 OE Crankcase Fill and Breathers (Clean breathers.)
- 10 GAA Winch Shaft Bearings
- 10 GAA Elevating Cylinder Upper Ball Joint (Sparingly.)
- 1000 Hydraulic Tank Drain Plug (Drain and refill.)
- 250 Hydraulic Filter (Remove, clean housing, add new filter unit, reinstall.)
- 10 GAA Drive Clutch Release Bearing (Sparingly.)
- 10 GAA Elevating Cylinder Lower Ball Joint (Sparingly.) (2 fittings)
- 50 GO Final Drive Fill and Level Plug (Check level.) (Raise elevator to vertical position to check level.) (See key.)
- 1000 Final Drive Drain Plug (Drain and refill.)

LUBRICANT • INTERVAL		INTERVAL • LUBRICANT	
Crankcase Oil Level Gage (Check level.)	10	10	GAA Upper Mast Sheave
Crankcase Oil Drain Plug (Drain and refill.)	100	1000	Winch Drain Plug (Drain and refill.)
Transmission Drain (Drain and refill.)	1000	50	Winch Level Plug (Check level.)
Drive Clutch Shaft (Springly.)	GAA 10	GO	Winch Fill Plug (See Key.)
		50	OE Hydraulic Tank Fill and level (Check level.) (See Key.)
Right Angle Drive Pinnion Carrier (Springly.) (5 fittings)	GAA 10	50	GO Transmission Fill and Level (Check level.) (See Key.)
Leveling Cylinder Support (Springly.)	GAA 10	10	GAA Lower Mast Sheave
Right Angle Drive Fill and Level Plug. (See key.) (Check level.)	GO 50	1000	Right Angle Drive Drain Plug (Drain and refill.)
		10	GAA Final Drive Pinnion Carrier (Springly.) (4 fittings)
		10	GAA Snatch Block

FOLD

FOLD

- KEY -

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		Above +32°F	+40°F to -10°F	0°F to -65°F	
OE-OIL, Engine, Heavy Duty		OE 30	OE 10	OES	Intervals given are in hours of normal operation.
Engine Crankcase	8 qt.				
Air Cleaner	2/3 qt.				
Oil Can Points					
Hydraulic Tank	216 qt.	OE 10			
GO- LUBRICATING OIL, Gear		GO 90	GO 90	GOS	
Right Angle Drive	2 1/2 qt.				
Final Drive	3 qt.				
Transmission	3 1/2 qt.				
Winch	1 qt.				
OES-OIL, Engine, Subzero					
GOS- LUBRICATING OIL, Gear					
GAA- GREASE, Automotive and Artillery		All Temperatures			

NOTES:

1. FOR OPERATION OF EQUIPMENT IN PROTRACTED COLD TEMPERATURES BELOW -10°F. Remove lubricants prescribed in the key for temperatures above -10°F. Re-lubricate with lubricants specified in the key for temperatures below -10°F.

2. OIL FILTER. After installing new filter element, fill crankcase, operate engine 5 minutes, check housings for leaks, check crankcase oil level and bring to full mark.

3. OIL CAN POINTS. Every 50 hours, clean and lightly coat all control linkages and wire rope with OE.

4. LUBRICANTS. The following is a list of lubricants with the Military Symbols and acceptable specification

numbers.

OF-MIL-L-2165

GO-MIL-L-2165

OES-MIL-L-10295

GOS-MIL-L-10324

GAA-MIL-G-16924

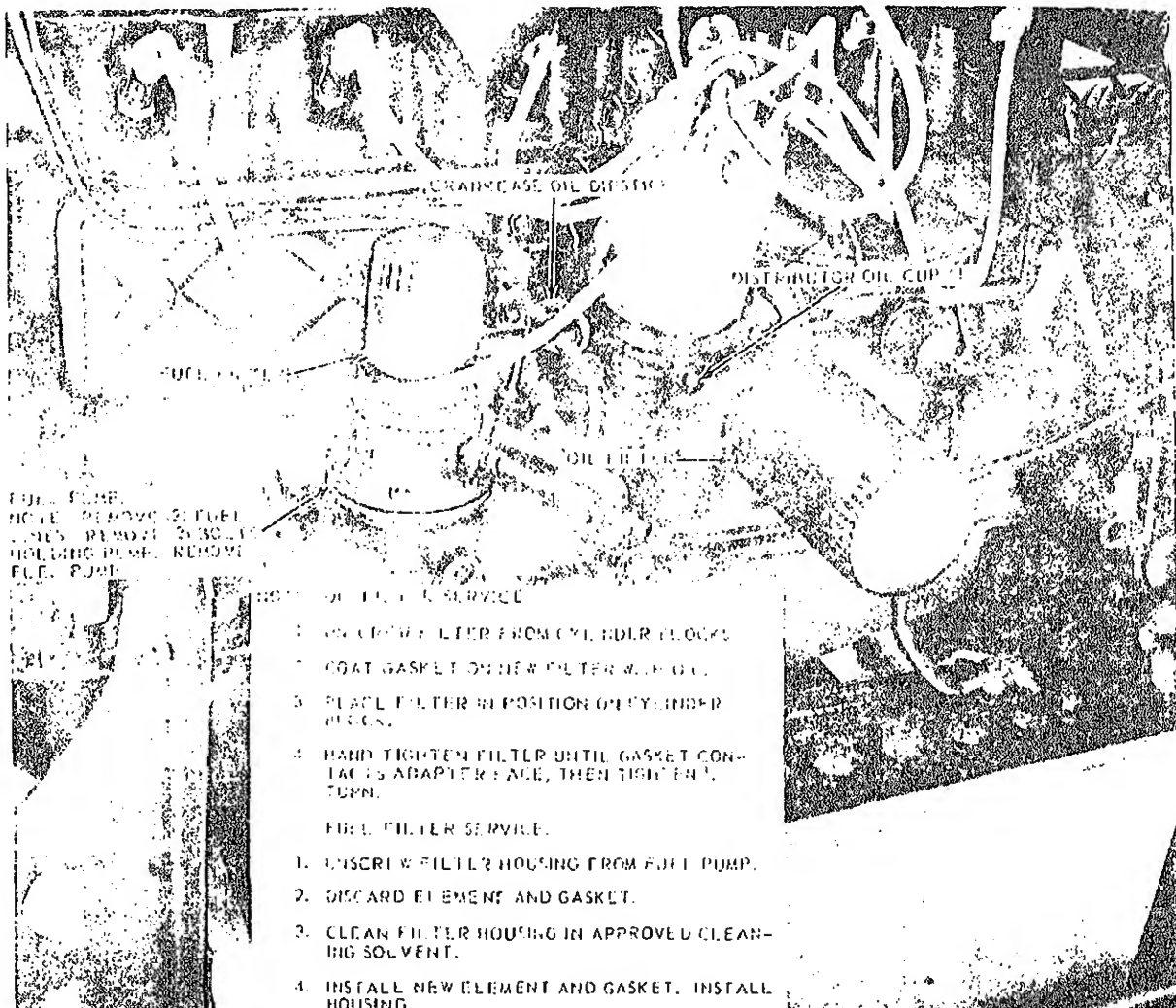
Copy of this Lubrication Order will remain with the equipment at all times; instructions contained herein are mandatory.

BY ORDER OF THE SECRETARY OF THE ARMY:

HAROLD K. JOHNSON,
General, United States Army,
Chief of Staff.

OFFICIAL:

KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General



3820-236-15-3-2

Figure 3-2. Engine service.

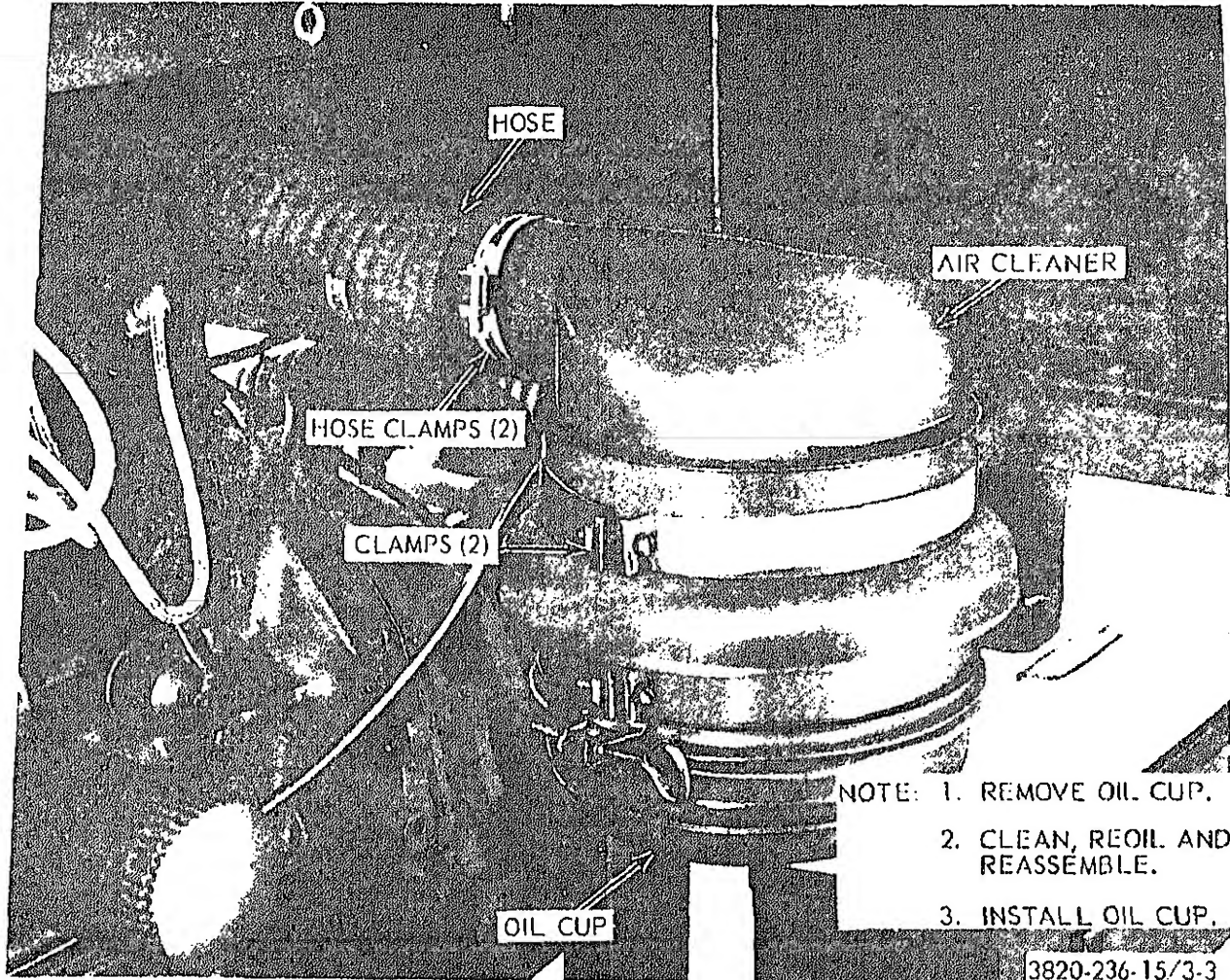


Figure 3-3. Air cleaner service.

3-5. General

To insure that the earth auger is ready for operation at all times, it must be inspected systematically so that defects may be discovered and corrected before they result in serious damage or failure. The necessary preventive maintenance services to be performed are listed and described in table 3-1. The item numbers indicate the sequence of minimum inspection requirements. Defects discovered during operation of the unit shall be noted for future correction, to be made as soon as operation has ceased. Stop operation immediately if a deficiency is noticed during operation which would damage the equipment if operation were continued. All deficiencies and shortcomings will be recorded together with the corrective action taken on DA Form 2404 (Equipment Inspection and Maintenance

Worksheet) at the earliest possible opportunity.

3-6. Daily Preventive Maintenance Services

This paragraph contains a listing of preventive maintenance services which must be performed by the operator. Refer to table 3-1 for the daily preventive maintenance checks and services.

3-7. Quarterly Preventive Maintenance Services

This paragraph contains a listing of preventive maintenance services which must be performed by organizational maintenance personnel at quarterly intervals. A quarterly interval is equal to 3 calendar months, or 250 hours of operation, whichever occurs first. Refer to table 3-1 for the quarterly preventive maintenance service.



Table 3-1. Preventive Maintenance Checks and Services

Interval				B—Before operation D—During operation	A—After operation W—Weekly	M—Monthly Q—Quarterly
Operator		M	Q			
Daily	Operator					
D	A	W		Item to be inspected	Procedure	Reference
		X		Fuel system Battery	Check level. Clean sediment bowl. Check electrolyte level and hand tightness of connections. Fill to 3/8 inch above the plates. In freezing weather run the engine a minimum of one hour after adding water.	Fig. 3-4 Fig. 2-1
				Cooling system	Check coolant level. Fill to 2 inch below filler neck.	
				Engine oil level	Check oil level. Add oil to proper level.	LO 5-3820-236-12
				Fire extinguisher	Check for broken seal. *Inspect for charge or insecure mountings. Weigh fire extinguisher.	Para 2-17
				Gages and instruments	Check for normal reading: Coolant temperature 160° to 180° F. Engine oil pressure 40 to 60 psi. Ammeter Charge side. Hydraulic oil gage 300-400 psi. Lubricate earth auger as specified in current I.O.	Para 3-51
			X		Inspect the valve lifter cover and gaskets for oil leaks. If noisy or loss of power is noticed, measure the rocker arm adjustment.	LO 5-3820-236-12
			X		Remove spark plugs and make compression test of engine. If there is more than a 10 lb variance, then trouble is related to faulty cylinder head gasket, piston, piston rings.	Para 3-23
			X	Compression test of engine		
			X	Crankcase and breather cap	Inspect crankcase for leaks. Inspect condition of crankcase breather	

M—Monthly
Q—Quarterly

A—After operation
W—Weekly